

## **MADERA COUNTY**

### **DATABASE ADMINISTRATOR**

#### **DEFINITION**

Under general direction, performs highly technical work in the analysis, planning, design, installation, and tuning of databases in various computing environments which may include mainframe, internet and client/server environment; maintains the quality, accuracy and integrity of data and master files; conducts needs assessments to evaluate, modify and maintain database software; and monitors and maintains data security, system recovery, and backup procedures for the database management system.

#### **DISTINGUISHING CHARACTERISTICS**

The Database Administrator (DBA) is responsible for functions associated with the efficient design implementation and maintenance of databases. The DBA maintains, designs, analyzes and monitors the integrity of databases and provides production support to ensure usable, accurate, accessible and secure data. Incumbents may conduct training and provide lead direction to others. Assignments at this level requires proficiency in at least one database management system such as Microsoft SQL, Pervasive SQL, Oracle, or other similar database engines.

#### **EXAMPLES OF DUTIES**

##### Essential:

- Develops and maintains database modeling, access and file structure requirements through discussions with users and other technical staff.
- Serves as staff and technical resource on database design, modification and/or upgrades.
- Prepares related documentation addressing design, data relationships, operational procedures, and programming procedures for databases.
- Assures logical and physical data models meet County standards for naming, metadata and other common data structures.
- Handles user requests for security changes and provides database application support for county databases; allocates and reallocates database resources for optimum configuration, database performance, and cost.
- Participates in systems analysis, design and implementation and advises and consults with application programmers during systems analyses.
- Develops standards and preferred methodologies for use of the County's database management system environment and associated application developments.
- Implements and maintains major mainframe, Internet and/or client server database environments; and maintains the security and integrity of the database.
- Reviews application access to ensure optimal performance.
- Reviews database utilization and performs tuning to ensure optimal performance; and responds to system problems that may affect the database.

## **EXAMPLES OF DUTIES**

- Implements and insures adherence to database backup, restart, recovery, and reorganization standards.
- Analyzes database management systems software and develops recommendations for acquisitions as appropriate.
- Evaluates new applications to determine compatibility with existing applications, hardware and software.
- Trains staff in the use of database tools and techniques.
- Develops and maintains data warehouse design and mining.
- Implements disaster recovery procedures.
- Stays abreast of new trends and innovation in the field of data network operations.

### **Important:**

- Attends and participates in a variety of meetings and committees.
- Researches hardware and database failures and configuration issues to discover fixes, identifies trends in technical failures, and recommends long-term solutions.
- Monitors vendor support web sites for new support information and maintenance patches, and applies or recommends fixes as needed.
- Performs related duties as required.

## **QUALIFICATIONS**

### **Knowledge Of:**

- Current technology in operating systems, database administration, application development technologies, and trends.
- Database administration and the ability to effectively perform installation, configuration management, security back-up and recovery procedures.
- Formal data structure designs and the ability to implement data structures to maximize efficiency and flexibility.
- System design and analysis, client-server architecture, along with relevant technical knowledge of data systems.
- Database design, development and maintenance, SQL operation, report design and development, query design and optimization.

### **Ability to:**

- Plan, coordinate and monitor complex projects.
- Assemble, install, configure, repair and maintain computer hardware, peripherals and components.
- Analyze problems, information requirements, and needs, develop logical solutions, read and comprehend technical information, and document technical information in writing.
- Use independent judgment and initiative in making recommendations regarding database applications, development and enforcement of database standards and database security.

Ability to:

- Communicate clearly and concisely, both orally and in writing, and prepare clear and concise written reports and correspondence.
- Establish and maintain effective working relationships with those contacted in the course of the work.
- Plan, organize, and evaluate the work of others.

Education and experience:

A typical way of gaining the knowledge and skills outlined above is:

Completion of two years of college level work in computer science or a closely related field, including course work in techniques of systems analysis; and two years of journey level experience performing database administration and customer support. (Experience in database administration planning, analysis and/or installation may be substituted for required education on a year-for-year basis). Qualifying experience must have been within the last five (5) years.

Licenses and Certifications:

Possession of a valid California driver's license within 30 days of hire.

Possession of one or more of the following: Industry certification as a Microsoft Certified Database Administrator (MCDA) Microsoft Certified Application Developer (MCAD), Microsoft Certified Professional Developer (MCPD), Project Management Professional (PMP), or equivalent certifications as determined by the Director of Information Technology.

Physical Demands and Working Conditions:

Mobility to work in awkward positions to install and repair computers and peripheral equipment; strength to lift, carry and place computers and related equipment; manual dexterity to operate keyboards, and precision tools and equipment; vision to read handwritten and printed material and computer screens; speech and hearing to communicate in person and by telephone

May require working overtime, on-call, and weekends, as well as occasional shift work.

Some accommodations may be made for some physical demands or otherwise qualified individuals who require and request such accommodations.

Other Requirements:

Must submit to and pass a criminal background investigation.

Effective Date: April, 2007